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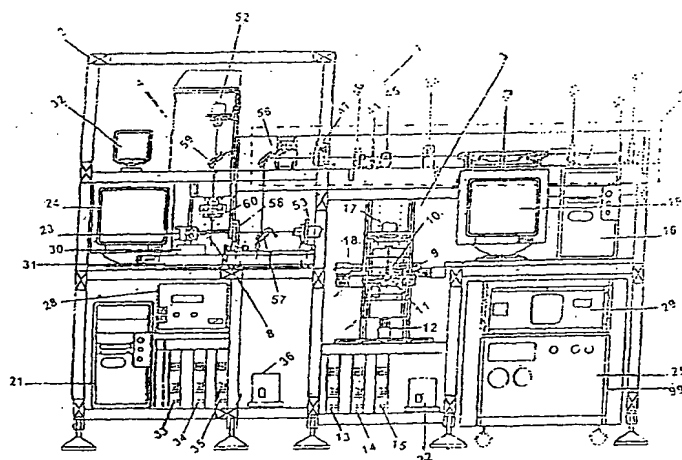
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(54) Title: A NOVEL LASER BRUTING MACHINE



(57) **Abstract:** A Novel Laser Bruting machine consists of mainly three sections (i) Diamond Holder (8) (ii) Set up device (3) & (iii) Processing device (4). Diamond holder (8) consists of rough diamond (5), stitching die (6) & magnetic die (7). Also the rough diamond stone to be centered and bruted is stitched on top of stitching die (6) by adhesive & heat. The stitching die (6) is then fixed on top of the magnetic die (7). Setup device (3) consist of CNC interface & video system. The diamond which is to be centered and hence diamond holder is put vertically on motorized rotatable platform (11). After completion of centering the diamond the diamond holder is carried to processing device & fixed horizontally on motorized rotatable platform (23) of processing device (4). Processing device consist of CNC Interface, Heat Exchanger (25), Video system, Beam delivery mechanism (26), Laser source (27), RF-Q Switch driver (28), Power supply (29) & stabilizer. Beam delivery mechanism of processing device consists of (i) Bruting process system and (ii) Girdle polishing system. With the standard software computer suggest an optimal cut to have accurate rounded shape of the diamond taking dimensions & shape into account.